

# Preventing Chemotherapy Errors With Comprehensive Medication Assessment

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Preventing medication and chemotherapy errors is a priority in oncology nursing. In this article, a case is presented detailing a medication error that occurred because of inadequate assessment. Such errors still can occur despite electronic systems designed to increase medication administration safety. The authors will discuss implications for oncology nurses.

## At a Glance

- Chemotherapy errors can occur if the American Society of Clinical Oncology and Oncology Nursing Society chemotherapy administration guidelines are not practiced consistently.
- Failure to observe the 10 principles of medication administration contributes to chemotherapy errors.
- Electronic safeguards may not prevent chemotherapy errors.

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Much attention is focused on preventing medication errors. New technologies have been developed to make the medication administration process more efficient and to prevent mistakes. However, technology does not replace meticulous nursing assessment during medication administration.

## Case Study

M.E., a 72-year-old female patient with a history of chronic myelogenous leukemia, arrived on the oncology inpatient floor from the hospital's emergency department for sepsis from a respiratory infection. Her medications had been reviewed independently by the emergency

department nurse and physician. The patient was seen regularly in the outpatient clinic, so her medication records transferred directly to the inpatient setting. During the initial nursing assessment on the inpatient oncology unit, which was confirmed during the physician's assessment, M.E. reiterated that she was still taking the same medications and dosages listed on her record.

A short while later, her nurse withdrew from the unit's automated medication distribution machine and proceeded to administer M.E.'s medications. At this time, the patient did not question any of the drugs the nurse administered. Those medications included hydroxyurea (Hydrea®), an oral antineoplastic medication

that was prescribed to be taken once per day at bedtime. About 15 minutes after the RN administered the medications, including the 500 mg of hydroxyurea, the patient questioned if the physicians had changed her dose of the chemotherapy agent because she already had taken the same medication that morning. Of note, the nurse was not certified as a chemotherapy and biotherapy provider.

The nurse immediately notified the physicians on the floor, including the hematology/oncology attending physician, and called the pharmacy to report the medication error. The attending physician and pharmacist agreed that no intervention was needed because of the low dose of the agent and the amount of time between administrations. Fortunately, the patient did not experience any negative consequences because of this error.

## Analysis

The American Society of Clinical Oncology (ASCO) and Oncology Nursing Society (ONS) have jointly published safety standards that should be strictly adhered to when administering all forms of chemotherapy agents, including oral agents (Neuss et al., 2013). These standards recommend that all nurses who administer chemotherapy be certified. Before the chemotherapy agent is administered, two certified providers should review the drug name, dose, volume, ordered rate (in the case of IV agents), and expiration date, as well as the patient's name and birthdate. In addition, a second safety check should be completed at the patient's bedside or chairside (Neuss et al., 2013). Because oral chemotherapy can have the same toxic effects as IV chemotherapy, the same handling and